

# **Biomedical Engineering**

**Study Year 1, Academic Year 2016/17 (Mandatory Courses)**

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	16/17	16/17	16/17	16/17
								sp1	sp2	sp3	sp4
<a href="#">EITA01</a>	12	G1	-	S	Introduction to Biomedical Engineering		<a href="#">KS KE U W T</a>	1	2		
<a href="#">FAFA65</a>	7.5	G1	-	S	Thermodynamics, Waves and Optics		<a href="#">KS KE U W T</a>	1	2		
<a href="#">EMAA01</a>	15	G1	-	S	Calculus in One Variable		<a href="#">KS KE U W T</a>	1	2	3	
<a href="#">KOKA20</a>	7.5	G1	-	S	General and Organic Chemistry		<a href="#">KS KE U W T</a>			3	
<a href="#">EXTA56</a>	5	G1	-	S	Clinical Training in Biomedical Engineering		<a href="#">KS KE U T</a>			3	4
<a href="#">EDA011</a>	7.5	G1	-	S	Programming, First Course		<a href="#">KS KE U W T</a>			3	4
<a href="#">EMA420</a>	6	G1	-	S	Linear Algebra		<a href="#">KS KE U W T</a>				4

**Study Year 2, Academic Year 2017/18 (Mandatory Courses)**

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	17/18	17/18	17/18	17/18
								sp1	sp2	sp3	sp4
<a href="#">EXTA70</a>	7.5	G1	-	S	Biology of the Cell		<a href="#">KS KE U W T</a>	1			
<a href="#">EMAB30</a>	6	G1	-	S	Calculus in Several Variables		<a href="#">KS KE U W T</a>	1			
<a href="#">FHLA05</a>	7.5	G1	X	E	Engineering Mechanics		<a href="#">KS KE U W T</a>		2		
<a href="#">EXTG50</a>	7.5	G2	-	S	Human Physiology		<a href="#">KS KE U W T</a>		2		
<a href="#">EEMA01</a>	9	G1	-	S	Biomedical Design		<a href="#">KS KE U W T</a>		2	3	
<a href="#">FAFF45</a>	8	G2	-	S	Physics for Biomedicine		<a href="#">KS KE U W T</a>			3	
<a href="#">EITE90</a>	7.5	G2	-	S	Electromagnetics and Electronics		<a href="#">KS KE U W T</a>				4

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links					
							17/18 sp1	17/18 sp2	17/18 sp3	17/18 sp4		
<a href="#">EITA50</a>	7.5	G1	X	S	Signal Processing in Multimedia		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4

**Study Year 3, Academic Year 2018/19 (Mandatory Courses)**

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	18/19	18/19	18/19	18/19
								sp1	sp2	sp3	sp4
<a href="#">EMSF70</a>	7.5	G2	-	S	Mathematical Statistics		<a href="#">KS KE U W T</a>	1			
<a href="#">EEMF15</a>	7.5	G2	-	S	Sensors and Measurements		<a href="#">KS KE U W T</a>	1			
<a href="#">EXTG05</a>	5	G2	-	E1	Biomaterials - Interaction between Living Tissue and Synthetic Materials		<a href="#">KS KE U W T</a>		2		
<a href="#">EEMF10</a>	5	G2	X	E1	Clinical Chemical Diagnostics		<a href="#">KS KE U T</a>		2		
<a href="#">FRTF01</a>	5	G2	X	E	Physiological Models and Computations		<a href="#">KS KE U W T</a>		2		
<a href="#">ETIF20</a>	5	G2	-	S	E-health		<a href="#">KS KE U T</a>			3	
<a href="#">MVKE20</a>	5	G2	-	S	Transport Phenomena in the Human Body		<a href="#">KS KE U W T</a>			3	

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links				
							18/19 sp1	18/19 sp2	18/19 sp3	18/19 sp4	
<a href="#">EXTG01</a>	5	G2	-	S	Medical Imaging Systems		<a href="#">KS KE U T</a>				4

**Specialisation bf - Biomedical physics**

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
											sp1	sp2	sp3	sp4
<a href="#">EEMN21</a>	7.5	A	V		4 - 19/20	4	X	E1	Introduction to Microfluidics and Lab-on-a-chip Systems	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">FAFF01</a>	7.5	G2	V		4 - 19/20	3	X	E	Optics and Optical Design	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EXTF90</a>	7.5	G2	V		4 - 19/20	4	X	E	Photon and Neutron Production for Science	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">BMEF10</a>	7.5	G2	V		4 - 19/20	4	-	S	Transducer Technology	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">FAFN01</a>	7.5	A	V		4 - 19/20	3	X	E	Lasers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">FAFN35</a>	7.5	A	V		4 - 19/20	4	X	E	Medical Optics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EXTP45</a>	7.5	A	V		4 - 19/20	4	-	S	Radiation Therapy Physics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">T</a>			3	



Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
										sp1	sp2	sp3	sp4
<a href="#">EEMN15</a>	7.5	A	V	4 - 19/20	4	X	E1	Ultrasound Physics and Technology	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">FFFN20</a>	15	A	V	4 - 19/20	4	X	E	Experimental Biophysics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">KIMN01</a>	7.5	A	V	4 - 19/20	4	X	E	Immunotechnology	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EEMN26</a>	7.5	A	V	4 - 19/20	4	X	E1	Lab-on-a-chip in Biomedical Applications	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">FAFN25</a>	7.5	A	V	5 - 20/21	4	X	E	Atomic and Molecular Spectroscopy	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EXTQ01</a>	7.5	A	V	5 - 20/21	4	X	E	Theoretical Biophysics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	

### Specialisation br - Biomechanics and rehabilitation

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
											sp1	sp2	sp3	sp4
<a href="#">BMEN05</a>	7.5	A	V		4 - 19/20	4	X	E	Biomechanics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EMAN20</a>	7.5	A	V		4 - 19/20	4	X	E1	Image Analysis	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">TNSF05</a>	7.5	G2	V		4 - 19/20	4	-	S	Rehabilitation Engineering	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EMAN30</a>	7.5	A	V		4 - 19/20	4	X	E1	Medical Image Analysis	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">FHLN10</a>	7.5	A	V		4 - 19/20	4	X	E	Modern Experimental Mechanics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">BMEN10</a>	7.5	A	V		4 - 19/20	4	X	E	Tissue Biomechanics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">BMEF20</a>	7.5	G2	V		4 - 19/20	4	-	E	Neuroengineering	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">T</a>			3	

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
											sp1	sp2	sp3	sp4
<a href="#">MAMF35</a>	7.5	G2	V		4 - 19/20	4	X	E	Human in Extreme Environments	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">TNSF10</a>	7.5	G2	V		4 - 19/20	4	X	E1	Universal Design, Theory and Project	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">MAMF30</a>	6	G2	V		4 - 19/20	4	-	S	Ergonomics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">FHLF20</a>	7.5	G2	V		4 - 19/20	3	X	E	Finite Element Method	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">FHLN05</a>	7.5	A	V		5 - 20/21	4	X	E	Computational Inelasticity	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">MAMN25</a>	7.5	A	V		5 - 20/21	4	-	S	Interaction Design	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">MAMN45</a>	7.5	A	V		5 - 20/21	4	-	S	People, Technology, Organization and Risk Management	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
										sp1	sp2	sp3	sp4		
<a href="#">FHLN01</a>	7.5	A	V	5 - 20/21	4	X	E	Structural Optimization		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3

### Specialisation sbh - Signals, images and e-health

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
											sp1	sp2	sp3	sp4
<a href="#">EMAN20</a>	7.5	A	V		4 - 19/20	4	X	E1	Image Analysis	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EITN60</a>	7.5	A	V		4 - 19/20	4	X	E	Optimum and Adaptive Signal Processing	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">FMSE10</a>	7.5	G2	V		4 - 19/20	4	X	E	Stationary Stochastic Processes	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EDAA01</a>	7.5	G1	V		4 - 19/20	2	-	S	Programming - Second Course	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EXTQ40</a>	7.5	A	V		4 - 19/20	4	-	E1	Introduction to Artificial Neural Networks and Deep Learning	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">FMSN45</a>	7.5	A	V		4 - 19/20	4	X	E	Mathematical Statistics, Time Series Analysis	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMAN30</a>	7.5	A	V		4 - 19/20	4	X	E1	Medical Image Analysis	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4
<a href="#">ERTF05</a>	7.5	G2	V	4 - 19/20	2	-	S	Automatic Control, Basic Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EITN65</a>	7.5	A	V	4 - 19/20	4	X	E1	Measurement and Modeling of the Central Nervous System Function		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">BMEN01</a>	7.5	A	V	4 - 19/20	4	X	E1	Biomedical Signal Processing		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EXTP60</a>	7.5	A	V	4 - 19/20	4	X	E1	Microscopy, Bio-Imaging		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EDAP10</a>	7.5	A	V	5 - 20/21	4	-	S	Concurrent Programming	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">BMEN15</a>	7.5	A	V	5 - 20/21	4	X	E	Signal Separation - Independent Components		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EXTQ20</a>	7.5	A	V	5 - 20/21	4	-	E1	Biological Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">FRTN35</a>	7.5	A	V	5 - 20/21	3	X	E	System Identification	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	Course on hold			

[EDAP10](#) Concurrent Programming: Replaces [EDAF55](#)

[ERTN35](#) System Identification: *The course is cancelled in the academic year 2020/21 but is planned to be given in 2021/22.*

## **Elective Courses - BME**

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">EITG05</a>	7.5	G2	4 - 19/20	4	X	E	Digital Communications		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">IYT000</a>	15	G2	4 - 19/20	3	-	S	Engineering Training Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>	1			
<a href="#">MIOA12</a>	6	G1	4 - 19/20	1	-	S	Managerial Economics, Basic Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">FMSE15</a>	7.5	G2	4 - 19/20	4	X	E	Markov Processes		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">FMAF01</a>	7	G2	4 - 19/20	4	-	E1	Mathematics - Analytic Functions		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EXTN65</a>	15	A	4 - 19/20	4	-	E	Neurobiology		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">FMNN01</a>	7.5	A	4 - 19/20	4	X	E	Numerical Linear Algebra		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			



Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">MMKN35</a>	7.5	A	4 - 19/20	4	X	E1	Product Innovation		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">ETSN05</a>	7.5	A	4 - 19/20	4	-	S	Software Development for Large Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EIEN45</a>	10	A	4 - 19/20	4	X	E1	Applied Mechatronics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EITF65</a>	9	G2	4 - 19/20	4	-	S	Design of Digital Circuits - A Systems Approach		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EMIN25</a>	7.5	A	4 - 19/20	4	-	S	Energy Systems Analysis: Energy, Environment and Natural Resources		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EMAN70</a>	6	A	4 - 19/20	4	X	E1	Matrix Theory		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EDAN95</a>	7.5	A	4 - 19/20	4	X	E	Applied Machine Learning		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">EXTG55</a>	15	G2	4 - 19/20	4	-	S	Biochemistry		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	2			
<a href="#">EEMF05</a>	7.5	G2	4 - 19/20	4	X	E1	Biomedical Measurements		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	2			
<a href="#">EXTA65</a>	4.5	G1	4 - 19/20	4	-	S	Cognition		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	2			
<a href="#">EITF45</a>	7.5	G2	4 - 19/20	4	-	S	Computer Communication		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	2			
<a href="#">EEMN10</a>	7.5	A	4 - 19/20	4	X	E1	Computerised Measurement Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	2			
<a href="#">EDAN10</a>	7.5	A	4 - 19/20	4	X	E	Configuration Management		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	2			
<a href="#">EMAA25</a>	7.5	G1	4 - 19/20	4	X	E1	Discrete Mathematics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	2			

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">IYT000</a>	15	G2	4 - 19/20	3	-	S	Engineering Training Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>		2		
<a href="#">MIOA12</a>	6	G1	4 - 19/20	1	-	S	Managerial Economics, Basic Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMAF05</a>	7	G2	4 - 19/20	4	-	E1	Mathematics - Systems and Transforms		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMEN11</a>	7.5	A	4 - 19/20	4	X	E	Mechanical Vibrations		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">FMNN10</a>	8	A	4 - 19/20	4	X	E1	Numerical Methods for Differential Equations		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMAN60</a>	6	A	4 - 19/20	4	X	E1	Optimization		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMAN40</a>	3	A	4 - 19/20	4	X	E1	Project in Applied Mathematics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">ERTN40</a>	7.5	A	4 - 19/20	4	X	E1	Project in Automatic Control		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EXTN30</a>	15	A	4 - 19/20	4	-	E	Sensory Biology		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMSN20</a>	7.5	A	4 - 19/20	4	X	E	Spatial Statistics with Image Analysis		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMSF60</a>	7.5	G2	4 - 19/20	4	-	E1	Statistical Methods for Safety Analysis		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMAF10</a>	5	G2	4 - 19/20	4	-	S	Applied Mathematics - Linear systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EDAP01</a>	7.5	A	4 - 19/20	4	X	E	Artificial Intelligence	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EITA25</a>	7.5	G1	4 - 19/20	4	X	S	Computer Security		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
									sp1	sp2	sp3	sp4
<a href="#">EMAN85</a>	6	A	4 - 19/20	4	X	E1	Computer Vision	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3
<a href="#">IYT000</a>	15	G2	4 - 19/20	3	-	S	Engineering Training Course	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>				3
<a href="#">EMAE35</a>	6	G2	4 - 19/20	4	X	E1	Linear and Combinatorial Optimization	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3
<a href="#">MIOA01</a>	9	G1	4 - 19/20	4	-	S	Managerial Economics, Basic Course	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3
<a href="#">EMAE01</a>	7	G2	4 - 19/20	4	-	E1	Mathematics - Analytic Functions	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3
<a href="#">EMSN50</a>	7.5	A	4 - 19/20	4	X	E	Monte Carlo and Empirical Methods for Stochastic Inference	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3
<a href="#">EMEN02</a>	7.5	A	4 - 19/20	4	X	E	Multibody Dynamics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
									sp1	sp2	sp3	sp4		
<a href="#">ETIA10</a>	7.5	G1	4 - 19/20	4	X	E	Patent and Intellectual Property Rights		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">EMSF05</a>	7.5	G2	4 - 19/20	4	X	E	Probability Theory		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">BMEN20</a>	7.5	A	4 - 19/20	4	X	E1	Project Course in Signal Processing – from Idea to App		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">MAMN35</a>	7.5	A	4 - 19/20	4	-	S	Risk Analysis Methods for Health and Environment		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">T</a>		3
<a href="#">EXTN85</a>	7.5	A	4 - 19/20	4	X	E	Scattering Methods		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">EMSN35</a>	7.5	A	4 - 19/20	4	X	E	Stationary and Non-stationary Spectral Analysis	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">EXTG45</a>	7.5	G2	4 - 19/20	4	-	S	Technology Supported Communication		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
									sp1	sp2	sp3	sp4
<a href="#">EDAF90</a>	7.5	G2	4 - 19/20	4	X	S	Web Programming	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">T</a>			3	
<a href="#">EITN85</a>	7.5	A	4 - 19/20	4	X	E	Wireless Communication Channels	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EDAF50</a>	7.5	G2	4 - 19/20	3	X	S	C++ Programming	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">EDAF75</a>	7.5	G2	4 - 19/20	4	X	S	Database Technology	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">EITA05</a>	4.5	G1	4 - 19/20	1	-	S	History of Technology	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">FRTN15</a>	7.5	A	4 - 19/20	4	X	E1	Predictive Control	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">FRTN01</a>	10	A	4 - 19/20	4	X	E	Real-Time Systems	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
									sp1	sp2	sp3	sp4		
<a href="#">EXTG55</a>	15	G2	4 - 19/20	4	-	S	Biochemistry		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EDAA25</a>	3	G1	4 - 19/20	4	X	S	C Programming		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EMEN05</a>	7.5	A	4 - 19/20	4	X	E1	Chaos		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">MMTF25</a>	7.5	G2	4 - 19/20	4	X	E1	Computer Aided Design/Computer Aided Manufacturing		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">FMSF65</a>	7.5	G2	4 - 19/20	4	X	E	Design of Experiments		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EMAA25</a>	7.5	G1	4 - 19/20	4	X	E1	Discrete Mathematics		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">IYT000</a>	15	G2	4 - 19/20	3	-	S	Engineering Training Course		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>		4



Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
									sp1	sp2	sp3	sp4
<a href="#">EHLN25</a>	7.5	A	4 - 19/20	4	X	E	Fracture Mechanics, Advanced Course	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EDAN40</a>	7.5	A	4 - 19/20	3	X	E	Functional Programming	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EMSN30</a>	7.5	A	4 - 19/20	4	X	E	Linear and Logistic Regression	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EMAN45</a>	7.5	A	4 - 19/20	4	-	E	Machine Learning	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">MIOF20</a>	6	G2	4 - 19/20	4	-	S	Management Organization	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EMAF05</a>	7	G2	4 - 19/20	4	-	E1	Mathematics - Systems and Transforms	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EEMN01</a>	7.5	A	4 - 19/20	4	X	E1	Micro Sensors	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">EMNF10</a>	6	G2	4 - 19/20	4	X	E1	Numerical Analysis		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EMAN40</a>	3	A	4 - 19/20	4	X	E1	Project in Applied Mathematics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">ETIF10</a>	7.5	G2	4 - 19/20	4	X	E1	Signal Processing - Design and Implementation		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">BMEN25</a>	7.5	A	5 - 20/21	4	X	E1	Project in Biomedical Engineering	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EITF05</a>	4	G2	5 - 20/21	4	-	S	Web Security		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EITN41</a>	7.5	A	5 - 20/21	4	-	S	Advanced Web Security		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EEMN05</a>	7.5	A	5 - 20/21	4	X	E1	EMC, Noise and Noise Reduction		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		

Course Code	Credits	Cycle		From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1 sp2 sp3 sp4				
		Year												
<a href="#">FHLN20</a>	7.5	A	5 - 20/21	4	X	E	Finite Element Method for Non-linear Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2			
<a href="#">BMEN25</a>	7.5	A	5 - 20/21	4	X	E1	Project in Biomedical Engineering	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2			
<a href="#">BMEN25</a>								X					3	
<a href="#">BMEN25</a>								X						4

[EDAP01](#) Artificial Intelligence: *Replaces [EDAF70](#)*

[FMSN35](#) Stationary and Non-stationary Spectral Analysis: *The course is offered every other academic year and will be given in 2019/20, 2021/22.*

[BMEN25](#) Project in Biomedical Engineering: *The course starts only after agreement with the department. The course is not linked to any specific study period. The information on hours depends on the course running over a study period. Individual study plans are to be set up and approved.*

## Externally Elective Courses - BME

Course Code	Credits	Cycle	Language			S.Ex. stud.	Course Name	Footnote	Links				
			Year	From year						sp1	sp2	sp3	sp4
<a href="#">GEMA20</a>	7.5	G1	4 - 19/20	1	-	E	English for Engineers	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">GEMA25</a>	7.5	G1	4 - 19/20	1	-	S	German for Engineers	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">GEMA70</a>	15	G1	4 - 19/20	1	-	S	Japanese for Engineers	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">GEMA65</a>	7.5	G1	4 - 19/20	1	-	S	Chinese for Engineers	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">GEMA20</a>	7.5	G1	4 - 19/20	1	-	E	English for Engineers	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">GEMA01</a>	7.5	G1	4 - 19/20	1	-	S	French for Engineers: Language, Culture and Society, First Course	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4

[GEMA20](#) English for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[GEMA25](#) German for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[GEMA70](#) Japanese for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[GEMA65](#) Chinese for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

[GEMA01](#) French for Engineers: Language, Culture and Society, First Course: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

## Bachelor's Projects - BME

The list contains the bachelor's projects that are included in the BME programme.

### Links

Course Code Credits

Course Name

EEML05	15	Bachelor Project in Clinical Innovation	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a>
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## Degree Projects - BME

The list contains the degree project courses that are included in the BME programme.

### Links

Course Code	Credits	Course Name	Links
FRTM01	30	Degree Project in Automatic Control	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
BMEM01	30	Degree Project in Biomedical Engineering	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
EDAM05	30	Degree Project in Computer Sciences for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
EITM01	30	Degree Project in Electrical and Information Technology	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
BMEM05	30	Degree Project in Electrical Measurements	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
MAMM10	30	Degree Project in Ergonomics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
MAMM01	30	Degree Project in Interaction Design	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
FMSM01	30	Degree Project in Mathematical Statistics for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
FMAM05	30	Degree Project in Mathematics for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a>
PHYM01	30	Degree Project in Physics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
TNSM01	30	Degree Project in Rehabilitation Engineering	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
FHLM01	30	Degree Project in Solid Mechanics for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>